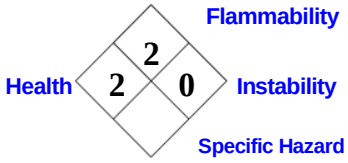
Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Product Name	**SULFIX® 9272 SCAVENGER**	**Code**	SX9272
Supplier	Baker Petrolite A Baker Hughes Company 12645 W. Airport Blvd. (77478) P.O. Box 5050 Sugar Land, TX 77487-5050 For Product Information/MSDSs Call: 800-231-3606 (8:00 a.m. - 5:00 p.m. cst, Monday - Friday) 281-276-5400	**Version**	8.0
Material Uses	Hydrogen Sulfide Scavenger.	**Effective Date**	**02/05/2009**
24 Hour Emergency Numbers	CHEMTREC 800-424-9300 (U.S. 24 hour) Baker Petrolite 800-231-3606 (001)281-276-5400 CANUTEC 613-996-6666 (Canada 24 hours) CHEMTREC Int'l 01-703-527-3887 (International 24 hour)	**Print Date**	02/05/2009
			® a trademark of Baker Hughes, Inc.

National Fire Protection Association (U.S.A.)



Section 2. Hazards Identification

Physical State and Appearance	State: Liquid., Color: Amber., Odor: Amine like.
CERCLA Reportable Quantity	Methanol, 5988 gal. of this product.
Hazard Summary	WARNING. May cause chronic effects. Combustible liquid. At elevated temperatures, vapors can form an ignitable or explosive mixture with air. Can form explosive mixtures at temperatures at or above the flash point. Vapors can flow along surfaces to distant ignition sources and flash back. Static discharges can cause ignition or explosion when container is not bonded. May be irritating to eyes, skin and respiratory tract. May be toxic by skin absorption. May cause skin sensitization (allergic reaction). May cause central nervous system (CNS) effects if inhaled.
Routes of Exposure	Skin (Permeator), Skin (Contact), Eyes, Inhalation.
Potential acute health effects	
Eyes	May cause eye irritation.
Skin	May be irritating to skin. Skin sensitizer. May cause allergic skin reactions with repeated exposure. May be toxic if absorbed through the skin.
Inhalation	May cause central nervous system (CNS) effects if inhaled. May be irritating to lungs.
Ingestion	Not considered a likely route of exposure, however, may be harmful or cause irritation if swallowed.
Medical Conditions aggravated by Exposure	Exposure to this product may aggravate medical conditions involving the following: kidneys, nervous system, liver, gastrointestinal tract, respiratory tract, skin/epithelium, eyes.
See Toxicological Information (section 11)	
Additional Hazard Identification Remarks	Repeated or prolonged contact may cause dermatitis (inflammation) and defatting of the skin (dryness).

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Section 3. Composition/Information on Ingredients

Name	CAS #	% by Weight
Alkanolamine/aldehyde condensate	Trade secret.	30 - 60
Methanol	67-56-1	5 - 10
Monoethanolamine	141-43-5	1 - 5

See Section 8 for information on permissible exposure limits and threshold limit values.

Section 4. First Aid Measures

Eye Contact	Flush eyes with plenty of water for 15 minutes, occasionally lifting upper and lower eyelids. Get medical attention immediately.
Skin Contact	Remove and launder or clean contaminated clothing and shoes. Wash with soap and water for at least 15 minutes or until no evidence of material remains. Get medical attention if irritation occurs.
Inhalation	Remove to fresh air. Oxygen may be administered if breathing is difficult. If not breathing, administer artificial respiration and seek medical attention. Get medical attention if symptoms appear.
Ingestion	If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never induce vomiting or give anything by mouth to a victim who is unconscious or having convulsions. Get medical attention if symptoms appear.
Notes to Physician	Not available.
Additional First Aid Remarks	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	Combustible liquid. At elevated temperatures, vapors can form an ignitable or explosive mixture with air. Can form explosive mixtures at temperatures at or above the flash point. Vapors can flow along surfaces to distant ignition sources and flash back. Static discharges can cause ignition or explosion when container is not bonded.
OSHA Flammability Class	II
Products of Combustion	These products are carbon oxides (CO, CO2) nitrogen oxides (NO, NO2...).
Fire Hazards in Presence of Various Substances	Open Flames/Sparks/Static. Heat.
Fire Fighting Media and Instructions	In case of fire, use foam, dry chemicals, or CO2 fire extinguishers. Evacuate area and fight fire from a safe distance. Water spray may be used to keep fire-exposed containers cool. Keep water run off out of sewers and public waterways. Note that flammable vapors may form an ignitable mixture with air. Vapors may travel considerable distances and flash back if ignited.
Protective Clothing (Fire)	Do not enter fire area without proper personal protective equipment, including NIOSH approved self-contained breathing apparatus.
Special Remarks on Fire Hazards	Not available.

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Section 6. Accidental Release Measures

Spill	Put on appropriate personal protective equipment. Keep personnel removed and upwind of spill. Shut off all ignition sources; no flares, smoking, or flames in hazard area. Approach release from upwind. Shut off leak if it can be done safely. Contain spilled material. Keep out of waterways. Dike large spills and use a non-sparking or explosion-proof means to transfer material to an appropriate container for disposal. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container. Note that flammable vapors may form an ignitable mixture with air. Vapors may travel considerable distances from spill and flash back, if ignited. Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Other Statements	If RQ (Reportable Quantity) is exceeded, report to National Spill Response Office at 1-800-424-8802.
Additional Accidental Release Measures Remarks	Not available.

Section 7. Handling and Storage

Handling and Storage	Put on appropriate personal protective equipment. Avoid contact with eyes, skin, and clothing. Avoid breathing vapors or spray mists. Use only with adequate ventilation. Store in a dry, cool and well ventilated area. Keep away from heat, sparks and flame. Keep away from incompatibles. Keep container tightly closed and dry. To avoid fire or explosion, ground container equipment and personnel before handling product.
Additional Handling and Storage Remarks	Not available.

Section 8. Exposure Controls/Personal Protection

Exposure Limits	Alkanolamine/aldehyde condensate	Not available.
	Methanol	**ACGIH (United States). Skin** TWA: 262 mg/m^3 8 hours. STEL: 328 mg/m^3 15 minute(s). TWA: 200 ppm 8 hours. STEL: 250 ppm 15 minute(s). **OSHA PEL 1989 (United States). Skin** TWA: 200 ppm 8 hours. STEL: 250 ppm 15 minute(s). TWA: 260 mg/m^3 8 hours. STEL: 325 mg/m^3 15 minute(s).
	Monoethanolamine	**ACGIH (United States).** TWA: 7.5 mg/m^3 8 hours. STEL: 15 mg/m^3 15 minute(s). TWA: 3 ppm 8 hours. STEL: 6 ppm 15 minute(s). **OSHA PEL 1989 (United States).** TWA: 6 mg/m^3 8 hours. TWA: 3 ppm 8 hours.
Additional Information on Exposure Limits		

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	The OSHA permissible exposure levels shown above are the OSHA 1989 levels or from subsequent OSHA regulatory actions. Although the 1989 levels have been vacated the 11th Circuit Court of Appeals, Baker Petrolite Corporation recommends that these lower exposure levels be observed as reasonable worker protection.
Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors or particles below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection

Personal Protective Equipment recommendations are based on anticipated known manufacturing and use conditions. These conditions are expected to result in only incidental exposure. A thorough review of the job tasks and conditions by a safety professional is recommended, however, to determine the level of personal protective equipment appropriate for these job tasks and conditions.

Eyes	Chemical safety goggles.
Body	Wear long sleeves to prevent repeated or prolonged skin contact.
Respiratory	Respirator use is not expected to be necessary under normal conditions of use. In poorly ventilated areas, emergency situations or if exposure levels are exceeded, use NIOSH approved full face respirator.
Hands	Chemical resistant gloves. Nitrile or Neoprene gloves. 4H gloves. Butyl rubber gloves.
Feet	Chemical resistant boots or overshoes.
Other information	Not available.

Additional Exposure Control Remarks	Not available.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.	**Odor**	Amine like.
pH	10 - 11.5 (5% of product in 75% isopropanol / 25% water solution)	**Color**	Amber.
Specific gravity	1.068 - 1.08 @ 16°C (60°F)		
Density	8.9 - 9 lbs/gal @ 16°C (60°F)		
Flash Points	Closed cup: 52.2°C (126°F). (SFCC)		
Flammable Limits	L.E.L. Not available. U.E.L. Not available.		
Autoignition Temperature	Not available.		
Initial Boiling Point	Not available.		
Boiling Point	Not available.		
Vapor Density	>1 (Air = 1)		
Vapor Pressure	63.7 - mm Hg @ 38°C (100°F) Calculated Value for all Components.		
Evaporation Rate	Not Available or Not Applicable for Solids.		
VOC	Not available.		
Viscosity	14 - 16 cP @ 16°C (60°F)		
Pour Point	-37ºC(-35ºF)		
Solubility (Water)	Soluble		
Physical Chemical Comments	Not available.		

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Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	Not available.
Incompatibility with Various Substances	Oxidizing material.
Hazardous Decomposition Products	Not applicable.
Hazardous Polymerization	Hazardous polymerization is not expected to occur.
Special Stability & Reactivity Remarks	Methanol is incompatible and may react with acetyl bromide, alkyl aluminum solutions, beryllium hydride, boron trichloride, nitric acid, cyanuric chloride, dichloromethane, diethylzinc, metals (granulated forms of aluminum and magnesium – including aluminum and zinc salts), phosphorus III oxide, and potassium tert-butoxide.

Section 11. Toxicological information

Component Toxicological Information

Acute Animal Toxicity

Alkanolamine/aldehyde condensate	ORAL (LD50): Acute: 763 mg/kg [Rat]. DERMAL (LD50): Acute: >2000 mg/kg [Rat].
Methanol	ORAL (LD50): Acute: 5628 mg/kg [Rat]. 7300 mg/kg [Mouse]. DERMAL (LD50): Acute: 15800 mg/kg [Rabbit]. VAPOR (LC50): Acute: 64000 ppm 4 hours [Rat]. 50000 ppm 4 hours [Mouse].
Monoethanolamine	ORAL (LD50): Acute: 700 mg/kg [Mouse]. 1720 mg/kg [Rat]. DERMAL (LD50): Acute: 1000 mg/kg [Rabbit]. VAPOR (LC50): Acute: <140 mg/m^3 4 hours [Guinea pig].

Chronic Toxicity Data

1) Alkanolamine/aldehyde condensate

Not available.

2) Methanol

Methanol is a component of this product. Because methanol is eliminated from the body more slowly than ethanol, it can have cumulative toxicity with repeated exposures (ACGIH, 1992).

Acute dermal, oral, and inhalation exposure to methanol can cause Central Nervous System effects, optic nerve effects, diminished vision, and brain effects (necrosis and hemorrhaging). (Bennett, I.L. et al, 1953)

Ingestion of methanol can cause Central Nervous System depression, metabolic acidosis, blurred vision and blindness, gastrointestinal effects, and coma and death. (Clayton, G.D. and Clayton, F.E., 1982, Patty's Industrial Hygiene and Toxicology, Vol2C) Dermal exposure to methanol can cause Central Nervous System depression, blurred vision, and gastrointestinal effects. (Downie, A et al, 1992, Occupational Medicine, 42, pp 47-9) Chronic inhalation of methanol can cause Central Nervous System depression, blurred vision, and gastrointestinal effects. (Frederick, L.J. et al, 1984, AIHA Journal, 45, pp 51-5) Chronic inhalation of methanol has caused liver effects in laboratory animals. (Poon, R et al, 1994, Toxocology and Industrial Health 10: 231-245) Chronic oral exposure has caused Central Nervous System effects and eye

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effects in laboratory animals. [Youssef, A. F. et al (1993) Neurotoxicology and Teratology 15: 223-227; Baumbach, G.L. et al (1977) Archives of Ophthalmology 95: 1859-1865; Hayreh, M.S. et al (1977) Archives of Ophthalmology 95: 1851-1858; Hayreh, M.S. et al (1980) Ocular toxicity of methanol: An experimental study – Raven Press, New York, pages 35-53; and Martin-Amat, G. et al (1977) Archives of Ophthalmology 95: 1847-1850]

Methanol has produced in vivo mutagenicity in animal studies. (Pereira, M.A. et al, 1982) and (Ward, J. B. et al, 1983)

Methanol was mutagenic in yeast (RTECS). Methanol has caused chromosome aberrations in yeast (RTECS) and grasshoppers (Saha & Khudabaksh, 1974).

Methanol has caused birth defects in rats exposed by the oral (Infurna et al, 1981) and inhalation (Nelson et al, 1984; Nelson et al, 1985) routes. Exencephaly (a defect in the skull bone structure that leaves the brain exposed) and cleft palate (a fissure or unformed bone structure in the roof of the mouth (palate), lip, or facial area, occurring during the embryonic stage of development) were increased in fetal mice exposed to methanol at an airborne concentration of 5,000 ppm or higher for 7 hours/day on days 6 to 15 of gestation.

Embryotoxicity and fetotoxicity were seen with maternal exposure to airborne concentrations of 7,500 ppm and above, and reduced fetal weights with concentrations of 10,000 ppm or greater. The NOAEL was 1,000 ppm. Effects similar to those seen in the 10,000 ppm dosage group were also seen in offspring of mice given a dose of 4 g/kg orally (Rogers et al, 1993).

3) Monoethanolamine

Monoethanolamine is a component of this product. Chronic occupational exposure reportedly was associated with chronic bronchitis, liver damage, weakness, and fatigue (Sidorov & Timofeevskaya, 1979; Paustovskaya et al, 1973). Occupational asthma has also been reported with chronic exposure (Kabe, 1971). Rats chronically exposed to monoethanolamine had degenerative changes in the liver, heart, and lungs (Beyer et al, 1983). Rats exposed orally to 640 mg/kg/day or more had alterations in kidney and liver weights; deaths occurred at a dose of 1280 mg/kg/day (Knaak et al, 1997). It has produced pancreatic effects in laboratory animals (Environmental Space Science 2:289-292, 1968)

Monoethanolamine caused chromosome damage in C. capillaris (plant) seeds (Gukasyan et al, 1986). Substances which are strongly alkaline can sometimes produce false-positive results in short-term genetic assays.

Monoethanolamine was teratogenic and fetotoxic in rats when given by gavage at doses up to 500 mg/kg/day on days 6 to 15 of gestation (Mankes, 1986). Dose-related maternal toxicity was present in the form of skin irritation or lesions and changes in maternal body weight (Liberacki et al, 1996).

Product Toxicological Information	
Acute Animal Toxicity	Not available.
Target Organs	kidneys, nervous system, liver, gastrointestinal tract, respiratory tract, skin/epithelium, eyes.
Other Adverse Effects	Not available.

Section 12. Ecological Information

Ecotoxicity	SULFIX® 9272 SCAVENGER	Fathead minnow (LC50)	96 hours	64 mg/l
		Sheepshead minnow (LC50)	96 hours	180 mg/l
		Skeletonema costatum (EC50)	48 hours	5.4 mg/l
BOD5 and COD	Not available.			
Biodegradable/OECD	Not available.			
Toxicity of the Products of Biodegradation	Not available.			

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Special Remarks	An EcoTox™ Report, and/or the material's environmental fate is available upon request at the following number: 1-800-235-4249, then press 4.

Section 13. Disposal Considerations

Responsibility for proper waste disposal rests with the generator of the waste. Dispose of any waste material in accordance with all applicable federal, state and local regulations. Note that these regulations may also apply to empty containers, liners and rinsate. Processing, use, dilution or contamination of this product may cause its physical and chemical properties to change.

Additional Waste Remarks	Not available.

Section 14. Transport Information

DOT Classification	FLAMMABLE LIQUID, N.O.S. (Contains: Methanol), 3, UN1993, III	
DOT Reportable Quantity	Methanol, 5988 gal. of this product.	
Marine Pollutant	Not applicable.	
Additional DOT Information	Not available.	
Emergency Response Guide Number	128	

Section 15. Regulatory Information

HCS Classification	Target organ effects. Combustible liquid. Irritant. Sensitizer.
U.S. Federal Regulations	
Environmental Regulations	Extremely Hazardous Substances: Not applicable to any components in this product. SARA 313 Toxic Chemical Notification and Release Reporting: Methanol; SARA 302/304 Emergency Planning and Notification substances: Not applicable to any components in this product. Hazardous Substances (CERCLA 302): Methanol, 5988 gal. of this product.; SARA 311/312 MSDS distribution - chemical inventory - hazard identification: fire; immediate health hazard; delayed health hazard; Clean Water Act (CWA) 307 Priority Pollutants: Not applicable to any components in this product. Clean Water Act (CWA) 311 Hazardous Substances: Not applicable to any components in this product. Clean Air Act (CAA) 112(r) Accidental Release Prevention Substances: Not applicable to any components in this product.
Threshold Planning Quantity (TPQ)	Not applicable.
TSCA Inventory Status	All components are included or are exempted from listing on the US Toxic Substances Control Act Inventory. This product does not contain any components that are subject to the reporting requirements of TSCA Section 12(b) if exported from the United States.

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State Regulations	State specific information is available upon request from Baker Petrolite.
International Regulations	
Canada	All components are compliant with or are exempted from listing on the Canadian Domestic Substance List.
WHMIS (Canada)	B-3, D-1B, D-2A, D-2B
European Union	All components are included or are exempted from listing on the European Inventory of Existing Commercial Chemical Substances or the European List of Notified Chemical Substances.
	International inventory status information is available upon request from Baker Petrolite for the following countries: Australia, China, Korea (TCCL), Philippines (RA6969), or Japan.
Other Regulatory Information	No further regulatory information is available.

Section 16. Other Information

Other Special Considerations

File 431
09/19/02 - Change in Section 9.
03/06/03 - Change in Section 4
04/09/03 - Changes to Sections 1, 3, 5, 8, 9, 12, and 15
09/26/03 - Change to Section 9.
08/19/04 - Changes in Sections 8, 9 and 15.
07/22/05 - Changes to Sections 2, 3, 5, 8, 9 and 15.
07/31/08 - Change to Section 12
02/05/09 - Change to Section 9

Baker Petrolite Disclaimer

NOTE: The information on this MSDS is based on data which is considered to be accurate. Baker Petrolite, however, makes no guarantees or warranty, either expressed or implied of the accuracy or completeness of this information.

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